DIGITAL VIDEO RECORDER

USER'S GUIDE

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1. Introduction

This operation manual was created to help you quickly and efficiently install the DVR system and its most commonly used features. It is important to go through this manual, follow each step in order and read the instructions carefully to ensure proper programming of the DVR system.

Note: Please set the screen resolution to 1024 X 768 pixels before continuing. Start > Control Panel > Display (double-click) > Settings. Adjust the screen resolution by moving the slider under "Screen Resolution."

System features

-Hardware support H.264 compression, low HDD cost

-Web access through Lan or Wan.

-Real time full-motion video-capture & display (Max. 64 channel video input)

-Real time high-speed recording: Max. 30 frames/sec per channel

-Synchronous audio recording (optional)

-Motion detecting (Whole area or max. 12 detection zones per channel)

-Normal recording (continuous) and event recording (Motion detection or external sensor)

-Electron Map pop-up when alarming

-System operating and alarm logging

-Alarm-before recording

-Remote recording

-Alarm message auto-sending

-Alarm image auto-sending to email box as attachment

-Matrix display and group display

-Duplex mode (Recording while playback)

-Network support (Remote access via LAN, Ethernet, PSTN, ISDN, ADSL)

-P/T/Z/F & speed dome control on keyboard

-Search/playback by date/time directory (random-access)

-Remote talking between server and client or server and server

Recommended System Requirements

-Chipset: Intel 845PE, 865PE, 875PE, 915P

-Motherboard: Intel: D915PCY, D865PERL Asus: P4P800SE, P5P800 MSI: 865PE Neo2-F, 865PE Neo3-F Gigabit: GA-8PE667, Ultra2 GA-8IPE1000PRO

-Video Card: ATI Radeon 9250 128MB ATI Radeon 9550 128MB nVidia GeForce 6200 128MB -nVidia GeForce 6600 128MB

-Processor: Intel Pentium 4 2.4GHz or better

-Memory: 512MB minimum

For optimal performance of your system, it is recommended that you divide your hard disk into at least two partitions (such as C: and D:). One partition is for installing Windows OS and system software, the other for storing recorded files.

2. DVR Server

2.1 Start up

1) Before you press the DVR power button, please check that all cabling if firmly attached.

2) Press the DVR system power button, and after Windows loads, the application interface will display (wait time depends on the number of channels your system has; Each channel needs about 4-5 seconds to load).

If the *DVR Autostart* file has been deleted from the Start Up folder, the software will fail to lauch automatically. If the software fails to lauch on its own, please double click icon

on Windows desktop, and the software will launch.

The main application interface is as follows:

Figure1-1-1

Following is an overview of each section of the DVR Software Interface. It's extremely important that you familiarize yourself with the interface, as later discussion of the more advanced features of the software will assume that you have already done so. Please note that the numbers prefacing each "section," roughly correspond to the blue numbers pictured in Figure 1-1-1 above.

1.1 Recording Status

In the upper right hand corner of each square displaying video footage is a small icon. This conveys the recording status of the camera sending footage to the square. The meaning of each icon is as follows:

a. This icon means the system is recording normally.
b. This icon means the system is recording manually.
c. This icon means the system is recording in motion detect.
d. This icon means the system is recording in sensor detect.

2.2 Main Interfaces

*Show tips: When the mouse moves close to or stops on a button, the button function text tip will show immediately.

*Full Screen Mode: Click right mouse button, popup a menu, select "full screen", change display mode to full screen (or press **F12** on the keyboard).

*Zoom in/out video image: Double click left mouse button on a camera window, zoom in/out video image (or press **F11** on the keyboard).

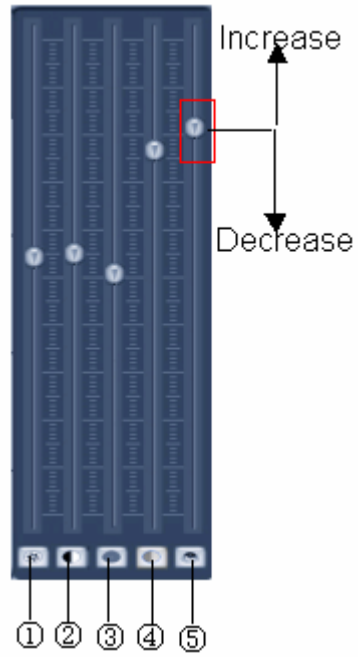
2.2.1 Interface description

1). OSD: Shows the OSD (On-Screen Display) including the current date, time, and the camera names, which are included within recorded files.

2). Version information: Version of the DVR Software.

3). Color Adjust: Slider adjustments for the video image and volume of the selected file.

This only affects the live view of the video images.



1) Allows user to adjust image brightness

2) Allows user to adjust image contrast

3) Allows user to adjust image Hue

4) Allows user to adjust image Saturation

5) Allows user to adjust Audio (corresponding to associated connected cameras)

4). PTZ Control:

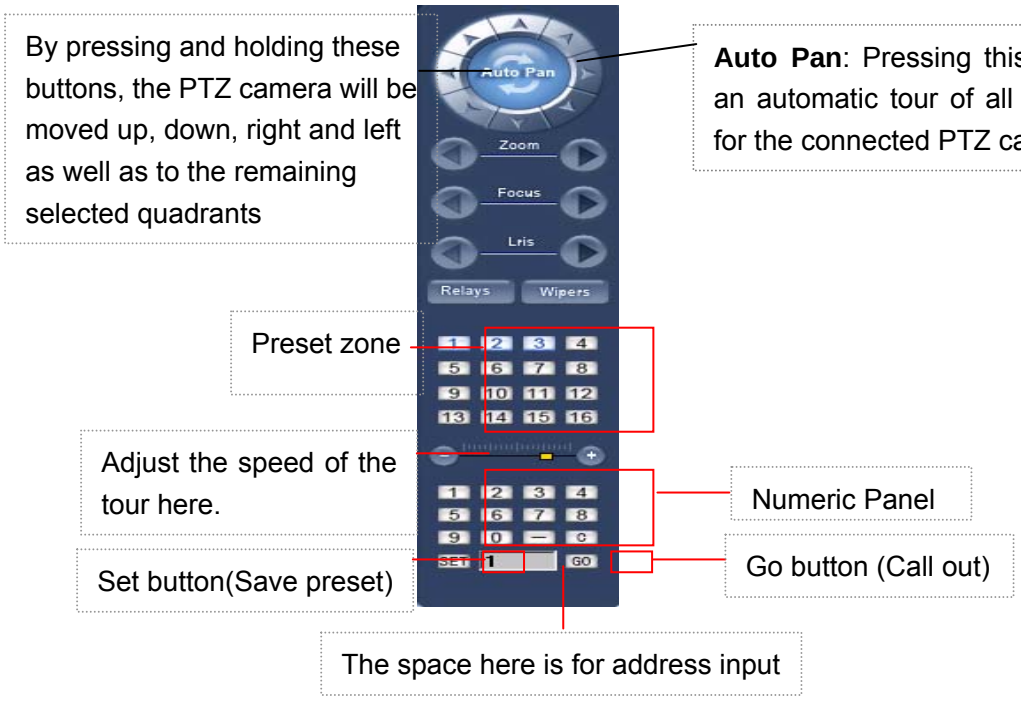

By pressing and holding these buttons, the PTZ camera will be moved up, down, right and left as well as to the remaining selected quadrants
Auto Pan
Zoom
Focus
Iris
Relays
Wipers
Auto Pan: Pressing this button initiates an automatic tour of all preset positions for the connected PTZ camera.
Preset zone
Adjust the speed of the tour here.
Numeric Panel
Go button (Call out)
Set button(Save preset)
The space here is for address input

Figure1-2-2

Relay(on/off): Control the PTZ cameras internal relay (relay1) or the decoders relay (relay 1). Used to turn on a light or control an access gate.

Wiper(on/off): If using the PTZ cameras corresponding wiper control relay, this toggles the relay/wiper on and off

Zoom +, Zoom- : Controls the zoom function of the PTZ camera.

Focus+, Focus-: Overrides the auto-focus setting of the PTZ camera, adjusts the focus of the image.

Iris+, Iris- : Overrides the PTZ camera auto-iris and brightens or darkens the image.

4)-1) Steps for setup:

Set the speed by adjusting the slider (left=slower, right=faster), input the address in address space (take 3 as an example here). Finally, press the SET button and the point for 3 will be illuminate. Set others in the same way.

4)-2) Delete Preset :

Click'-'button, select preset number from numeric panel then click SET button.

4)-3) preset

If preset number is less than 16, call out directly by clicking the number button in PRESET ZONE.

If preset number is more than 17,call out by clicking number button then click GO.

4)-4) Auto tracking along with all preset.

Start tracking:

In numerical panel click ”-“+”number”(this number is the interval of every preset),then click GO.

Stop tracking:

In preset zone, click any preset, then click GO.

NOTE: PTZ Cameras can also be controlled from the main screen.

Figure1-2-3

On screen 3 above, each rectangle area is the effective area of every action. The arrows denote the direction of the action. Press and hold down the mouse, moving in the desired direction you’d like the PTZ to move towards, and the camera will respond.

5). Net Work Panel: On this panel, the network configuration of the system is displayed.

Information of hardware

IP address of the system

Subnet Mask

Net Gate

When a client's computer is linked remotely, its IP address will be displayed (the current IP only)

Figure1-2-4

6). Matrix & Display: This panel includes Matrix and Display Groups. Each group includes 16 numeric buttons, each button denoting one type of Matrix or display. This will be shown in "system setup" (more info on this later).

7). DO Control

8). System active information Panel:

Figure1-2-5

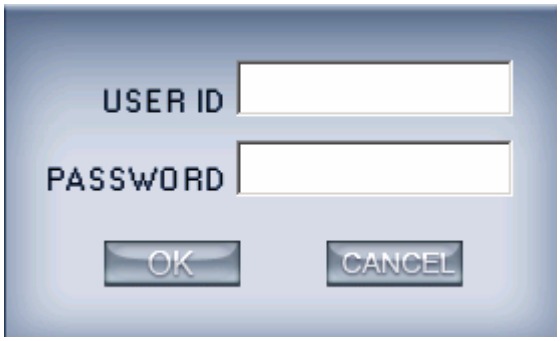
This panel shows current date, current time, day of the week, free hard disk space and a description of the camera associated with the current window.

9). Enter Playback Mode: Allows users to enter playback software suite, and search for recorded video/audio.

10). System Setup.

11). System Lock: Prevent unauthorized user to operate system by locking keyboard and mouse.

Press button , the dialog box will be displayed. Input your User ID and password then press OK. Default User ID is "admin", no password.



***Note: If the DVR system is not being configured as User Manage Mode, the lock button will be unusable.**

12). Display mode: The window display mode of the main screen. You can display anywhere from 1 to 64 cameras on the screen, in several configurations, including 1,4,9,12,16,20,25,28,33,36,40,49,64. Select a suitable setting based on the number of cameras you have.

13). Menu: *Click to display popup menu with the following options:* **Remote chat**, open **E-Map**, **write working log** , **view system log** ,**motion setup**, **keyboard shortcuts setup**, **DVR board work mode** and **playback to TV monitor**.

13)-1) Remote chat: Connect to a remote client or Server for live chat through IP.

13)-2) Electron Map: Click SETUP icon and then click the right arrow on the map, the picture on the right of the map will appear. Add or delete sensors and cameras (the cameras are those pointed to by the arrow). Or change the digital map.(as following):

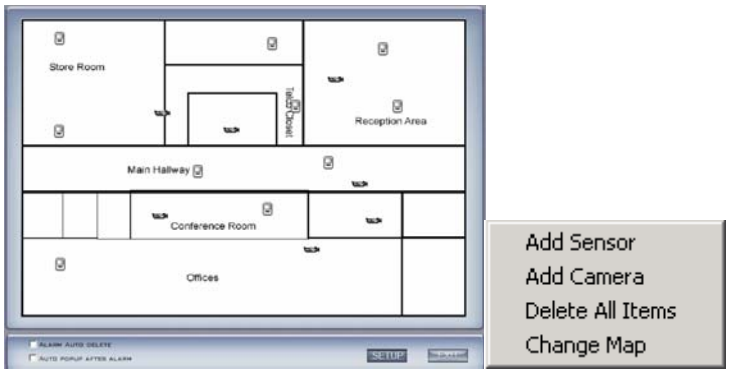


Figure1-2-7

If it is set to appear automatically when a sensor is touched, the map will appear automatically and the sensor being touched will be marked.

13)-3) Write Working log: This is useful for documenting events that occur during an operator's shift.

Figure1-2-8

13)-4) System Log: Allows users to view all recorder activities as well as operator log reports created.

System log keeps a record of system events such as shutdown, camera setup changes, program startup and shutdown, and all Operator or System Administrator's daily activities according to time and date. Users can search by date and by system parameters. System parameter includes operations, system prompts, alarms and other activities.

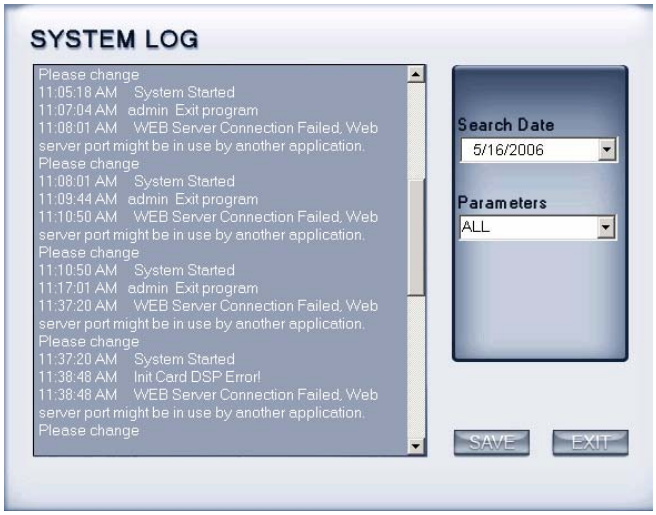

SYSTEM LOG
Please change
11:05:18 AM System Started
11:07:04 AM admin Exit program
11:08:01 AM WEB Server Connection Failed, Web server port might be in use by another application.
Please change
11:08:01 AM System Started
11:09:44 AM admin Exit program
11:10:50 AM WEB Server Connection Failed, Web server port might be in use by another application.
Please change
11:10:50 AM System Started
11:17:01 AM admin Exit program
11:37:20 AM WEB Server Connection Failed, Web server port might be in use by another application.
Please change
11:37:20 AM System Started
11:38:48 AM Init Card DSP Error!
11:38:48 AM WEB Server Connection Failed, Web server port might be in use by another application.
Please change
Search Date
5/16/2006
Parameters
ALL
SAVE
EXIT

Figure1-2-9

13)-5) Motion Detection area & cover area Set-Up: Used to set up the built-in motion detection.

By default the entire screen is set up for motion detection as indicated by the green border around the image. To mask a specific area, at first, click the DELETE button to get rid of the full screen detection border. Then left click and hold while stretching a rectangle. A green rectangle will mark the area of interest. Several areas of interest may be used. Any activity within the green bordered areas will trigger recording, depending on the reaction method, and alarms may be generated along with e- map icons

flashing in alert mode. Click the TEST mode icon to test the sensitivity of motion detection. The sensitivity can be adjusted using the slider bar at the bottom of the motion detection window. Please note that this section only describes how to set up motion detection areas of interest. The actual activation of a camera for motion detection is done in the **Camera Setup > Group Setup** section of the software. This is where you establish WHICH cameras will perform in motion-detection mode. Please refer to the table of contents for more info.

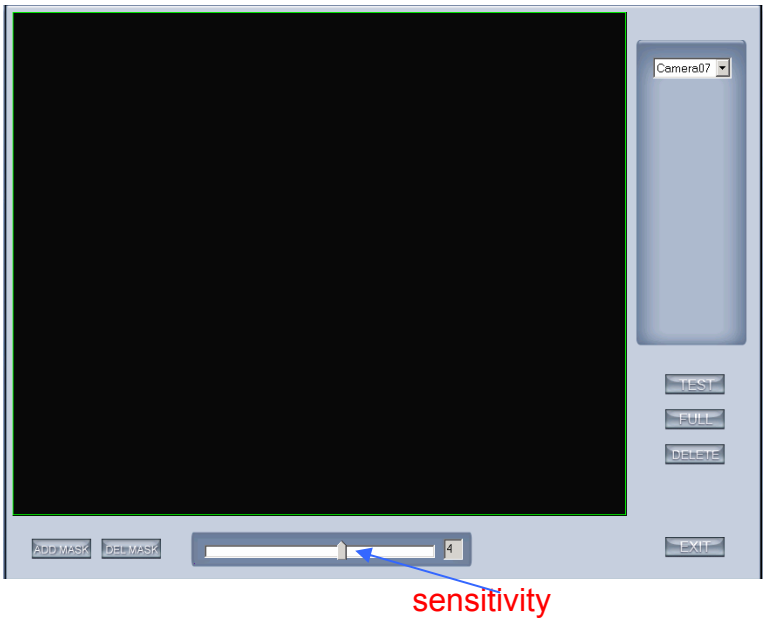


Figure1-2-10

Add a cover area. If there are some areas you don't want shown, draw over those areas with the mouse till they change to the color black. You can set several cover areas. Press this button, set cover area, and another press, setup finished.

Delete all cover areas.

13)-6) Keyboard shortcuts setup.

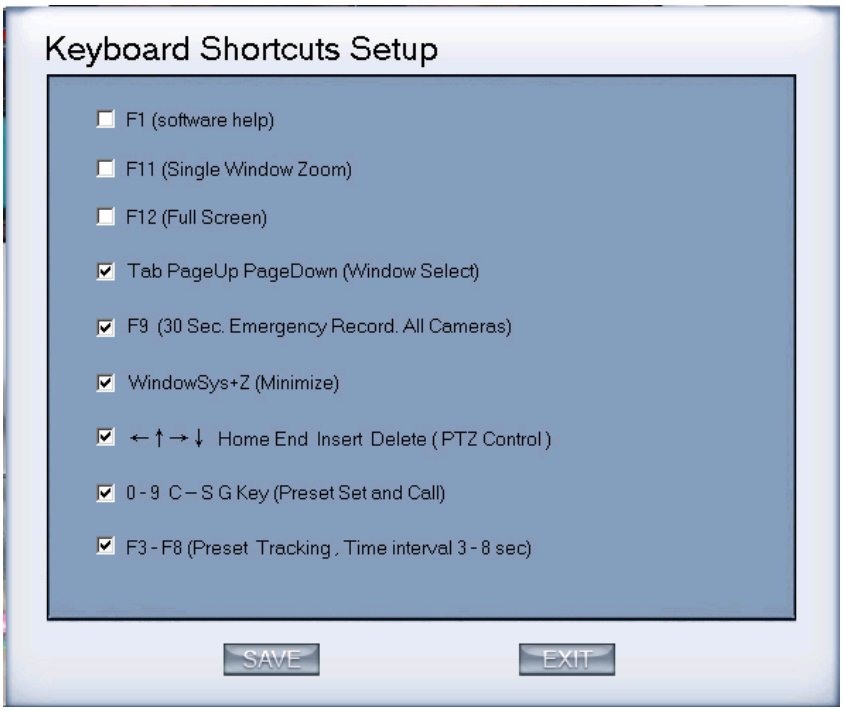
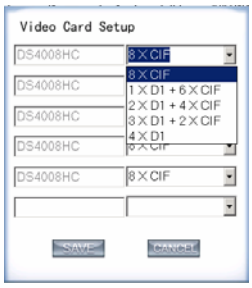

Keyboard Shortcuts Setup
F1 (software help)
F11 (Single Window Zoom)
F12 (Full Screen)
Tab PageUp PageDown (Window Select)
F9 (30 Sec. Emergency Record. All Cameras)
WindowSys+Z (Minimize)
← ↑ → ↓ Home End Insert Delete (PTZ Control)
0 - 9 C – S G Key (Preset Set and Call)
F3 - F8 (Preset Tracking , Time interval 3 - 8 sec)
SAVE
EXIT

Figure1-2-11

Click **Lock Sensitive Fast Key**, and choose the fast keys you want to disable.

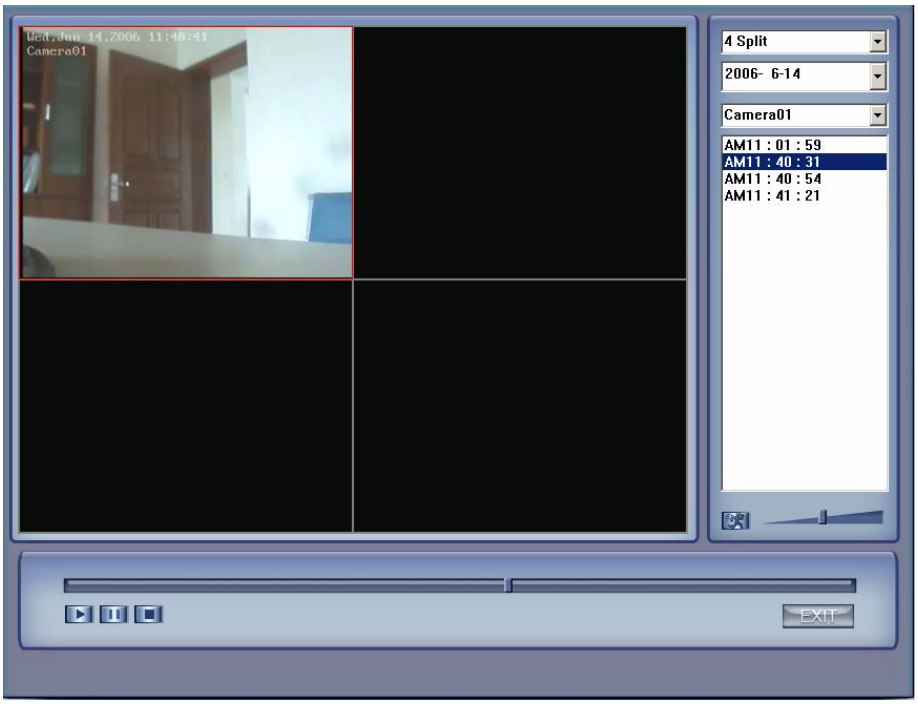
Click **SAVE** to apply your settings.

13)-7) DVR board work mode setup: change DVR board work mode.



The new DVR board work mode will take effect after restarting DVR Server software.

13)-8) Playback to TV monitor: In DVR system ,the recording data can be transmited to TV monitor via a Matrix card.



When running the “playback to TV monitor” process, the Matrix card will output recording data. If this process does not run the ,Matrix decode card will output real-time video according to your setup. During this process, you can playback recorded files by date and camera, and the recorded file will be played automatically.

14). Minimize button: Minimize the main window (or press WIN + Z on keyboard).

15). Exit program: Click this power off button and following dialog box will display.

Figure1-2-12

Click “OK” to quit DVR system.

16).Function Key:

Cameras sequence— partition auto-switch.

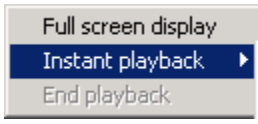
Emergency record button—This button triggers recording on all cameras in 30 seconds, even they have been set up to record by motion, sensor or time period. This function is useful in emergencies where quick action is required.

Image Capture—Allows user to save a still image of a selected camera in live view.

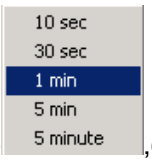
Manual record button(on/off)—Allows user to record manually by any camera. (Note: must be stopped manually).

2.2.2. Instant playback of recorded files in the current window

Press TAB key on keyboard, or press Page UP (select next camera window) or Page Down(select last camera window) key, select one camera window, right-click,



,select “Instant playback”, and another menu will popup



,choose the time, system will playback in the current window according to your selected. For example,if you choose 1min,system will playback last minute of recorded footage.

If you want to stop the instant playback, right-click in the playback window, and select End playback

.

2.3 System configuration:

Click in the main system screen to enter into the DVR system set-up mode:

The DVR System Configuration and Set-Up includes 7 options:

System set-up

Camera set-up

Sensor set-up

PTZ & linkage set-up

Email set-up

Matrix set-up

User set-up

A description of each option follows below.

2.3.1. System set-up

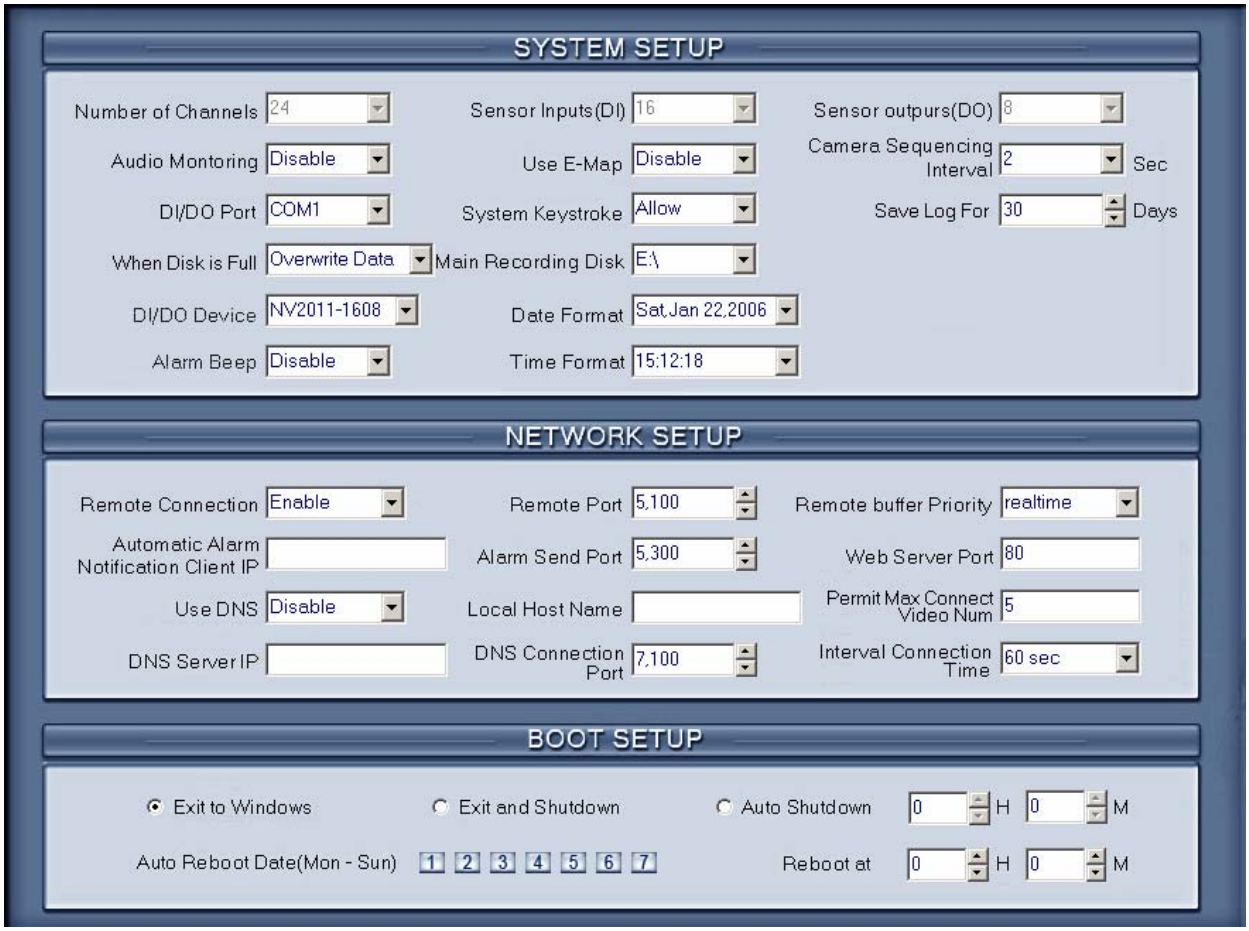


Figure1-3-1

SYSTEM SETUP Set system parameters.

[Number of Channels] Displays the total number of channels.

[Sensor Input(DI)] Display the number of sensors (DI).

[Sensor Output(DO)] Display the number of alarms(DO).

[Audio Monitoring] Turns audio monitoring on/off.

[Use E-Map] Enables/Disables Electron Map when there is an alarm.

[Camera sequencing interval] Set auto-split changing speed.

[DI/DO Port] Select sensor/alarm driver connecting port. Must be different from PTZ Port. If you are not using the alarm input function, you can disable this to save system resources.

[Save Log for() Days] Log save days(max 100 days).

[When disk is full] Select record mode when there is not enough HDD free space. If

“Overwrite data” is selected, DVR system will auto-delete the recorded data of the earliest day when there is not enough space. If “Stop recording” is selected, DVR system will stop recording and give a warning message.

[Main Recording Disk] Select the disk partition that the DVR system should save data to.

[System Keystroke] System keystroke. When enabled, functions of some system keys will be disabled (Ctrl+Alt+del Included).

[DI/DO Device] Selects alarm driver type.

[Alarm Beep] Disable or enable beep alarm from drop-down list. When there is an alarm, system will make beep voice if “enable” is selected.

[Date Format] Determines the manner is which the date is displayed on the main screen and date panel of the playback window.. E.g., day/month/year vs. year/day/month.

[Time Format] Select time mode.

NETWORK SETUP

[Remote Connection] Enable/Disable network connection.

[Remote Port] Select remote connection port.

[Remote buffer Priority] There are three options: “**Smooth**” prioritizes quality over framerate, while “**Realtime**” prioritizes framerate over quality.

[Automatic Alarm Notification client IP] Allows a network client to receive alarm message when there is an alarm. The alarm channel image will automatically display in the client software.

[Alarm Send Port] This is the alarm message connecting port.

[Web Server Port] This is the Internet Explorer client connecting port.

[Use DNS] Enable/Disable DNS for supporting dynamic IP.

[Local Host Name] Input the name description for DNS Server identification.

[DNS Server IP] DNS server host IP.

[DNS Connection Port] DNS server host port is provided to connect DNS software.

[Interval Connection Time] Interval time connects DNS automatically.

[Permit Max Connect Video Num] The Maxium number of video streams permitted to connect to the DVR server from the client end. The number should be set relative to the amount of bandwidth available to the DVR System. The maximum is 256.

***Note: Alarm auto connection to IP is used to transmit alarm information automatically to clients. When sensor, normal, or motion record is activated and there are registered client IP address, the system will check if the client are connected with the DVR System. If there is no connection, the system will try to connect with it through Port 5300(preset). If it cannot connect, the system will keep trying until it can. For this reason, it is important to ensure that client software is running on all remote computers, listening on Port 5300, with a dependable network/internet connection. Otherwise, the system will not be stable.**

***Note: DNS server work mode**

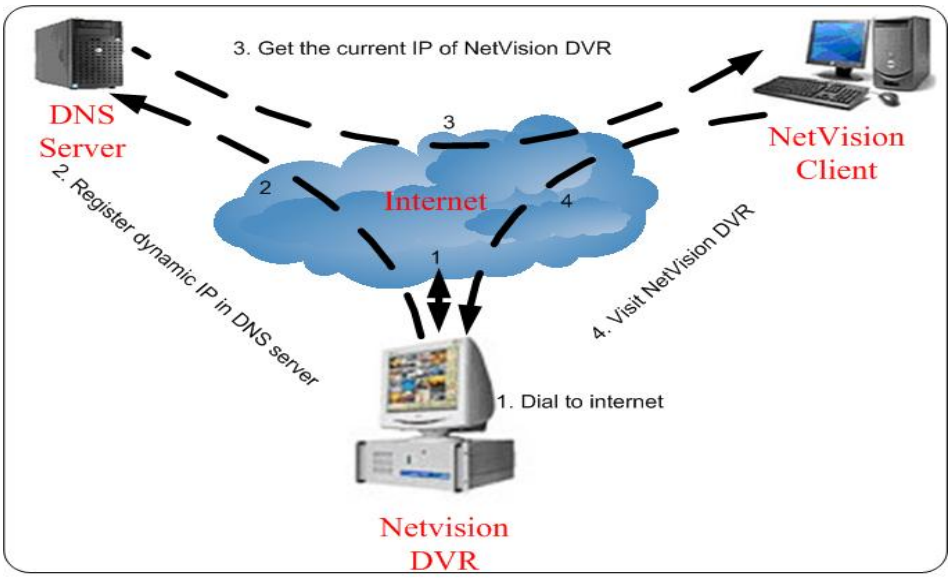


Figure1-3-2

1. If your DVR System has a dynamic IP, you should configure your DVR system as follow :

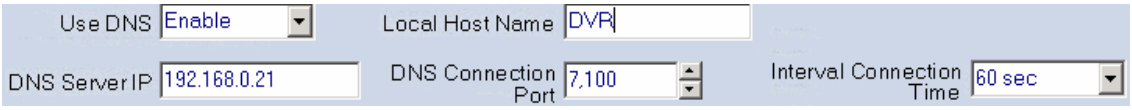


Figure1-3-3

2. DNS server will obtain your DVR's domain name and the current IP address.

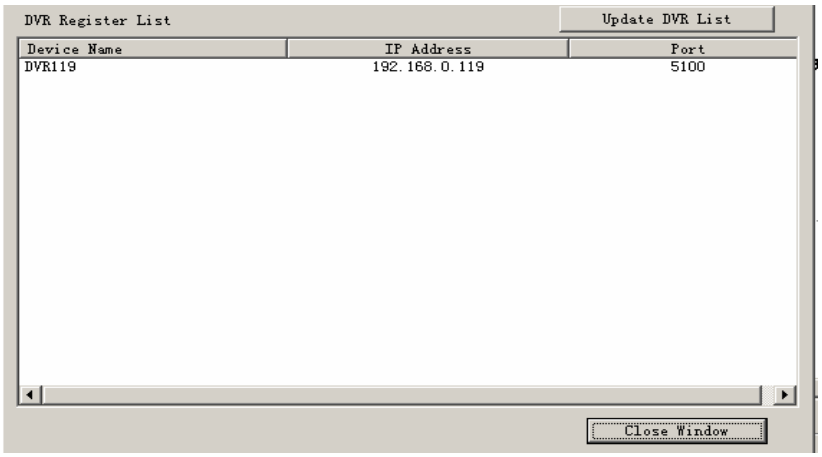


Figure1-3-4

3. Clients will get the DVR's System's current IP address through the DNS server according to the DVR's domain.

4. Clients will visit the DVR System through the IP address obtained from the DNS server.

BOOT SETUP For the purpose of stability, the DVR System can be set to restart automatically.

[Exit to Windows] User can exit program and return to windows desktop.

[Exit and Shutdown] User can exit program and shut down the computer.

[Auto Shut Down] Schedule auto-shutdown.

[Auto Reboot Date(Mon-Sun)] Select DATE for auto-reboot.

[Reboot at] Set auto-restart TIME.

2.3.2. Camera Setup

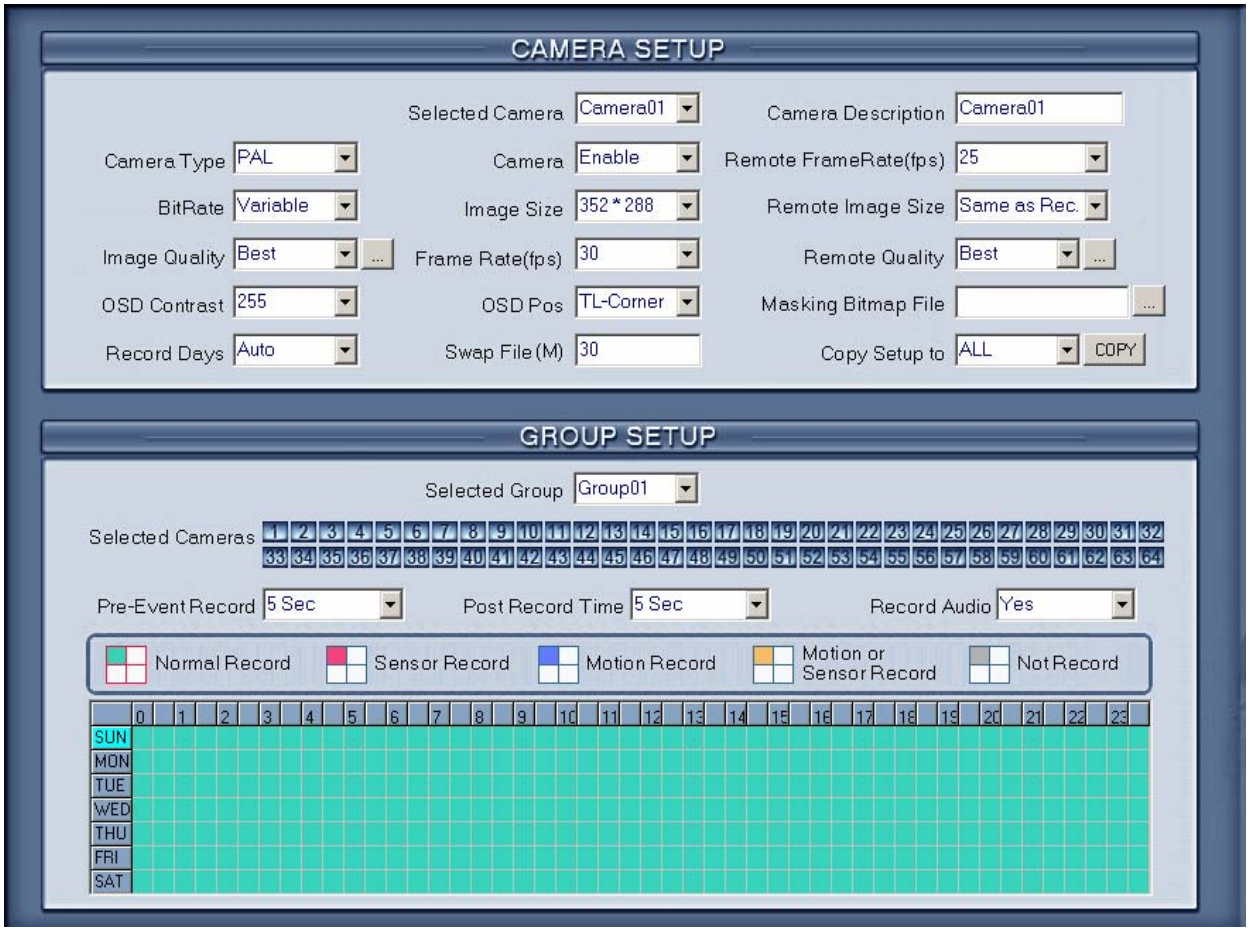


Figure1-3-5

CAMERA SETUP Individual Setup

[Selected Camera] Set a camera's parameters by selecting the camera from the drop-down list.

[Camera Description] Customize camera names for easy identification.

[Camera Type] Select camera type from drop-down list. PAL or NTSC.

[Camera] Enable or disable selected camera. Video loss detection will sound if a camera is not physically connected while enabled. For this reason, be sure to have a camera physically connected before enabling it here.

BitRate] Set record mode. Variable Bit Rate (VBR) or Constant Bit Rate (CBR) Recording.

VBR allows the bit rate of each frame to vary, depending on the image complexity, activity and color. Saves hard drive space when less complex frames are being encoded.

CBR allows each frame to be recorded at fixed rate, irrespective of scene activity. In many cases, this limits detail (resolution). The benefit of CBR is its ability to accurately estimate the total video storage time.

[Image Size] Users can select from CIF,Half D1 & Full D1 Image Sizes. If Full D1 is used, the recording framerate will be 12-15 fps.

[Image Quality] Sets the quality of the image to be recorded from Poorest, Poor, Medium, Very good and Best.

Click this button, users can make advanced setup for video quality, and set up I B P frame and maximum bit rate. (Note: we do not advise you to setup these features if you are not familiar with them)

[Frame Rate(fps)] Sets the recording rate for the selected camera. For frames per second (fps), The rate should be from 1 to 30 fps. If the camera's **Image Size** is set to Full D1, the frame rate should be set around 12-15 fps.

[OSD Contrast/OSD Pos] Sets OSD display brightness & position. An "auto" item in OSD Contrast's drop-down list will make OSD suit the background's color automatically.

[Record Days] This section allows users to determine how long the recorded data of each camera should be kept by the system. The maximum duration for on-line storage is 120 days. Users can select exact number of days, or select "auto" mode. In "auto" mode, the DVR System will auto-delete the earliest recorded data when there is not enough space.

[Swap File] Set recorded video file size saved in HDD. For easy backup, don't set too large file size. This is essentially the size fo the "chunks" of recorded footage. For example, if you plan on backing up data to DVD-R, you'd want to set this size to about 4.5GB, roughly the amount of data that can fit on a blank DVD-R Disk.

****NOTE: If there is not enough hard drive space, the DVR System ALWAYS deletes data from the earliest date.***

[Copy SetUp to] Apply selected camera's parameters to other cameras.

[Masking Bitmap File] Watermark function, the logo picture must be edited at 128*128 pixels file size and saved in bmp format.

[Remote Frame Rate(fps)] Set the frame rate of clients connecting remotely to the DVR System.

[Remote Image size] Select image resolution to be transmitted to the client side.

[Remote Quality] Set the image quality of the client side: Poorest, Poor, Medium, Very good and Best.

Click this button, users can customize video quality on the client end; can also set up I B P frame rate, and adjust maximum bit rate based on network bandwidth.

***Notes:**

1. On rare occasions, a camera may be incapable of providing an image for a brief period of time, due to bandwidth fluctuations. An alarm will sound, to tell you video information is missing. Simply disable the camera to turn the alarm off, then enable the camera again to bring the video back.

2. The unit of the swap file is in megabytes. 2-50 is the range.

3. Sometimes the date cannot be clearly seen because its color is similar to that of the background. The position and contrast of the date shown on the screen can be adjusted.

4. Image size applies to RECORDED data. Remote image size applies to this recorded data being transmitted to client sides.

5. Remote Frame Rate , Remote image size and Remote Quality apply ONLY to the client side. When the server's resolution is set as "D1 Auto F", these three items have no effect; The client parameters will be the same as the server's. When the server's resolution is set as others (except "D1 Auto F"), if Remote image size is set to "With Record," Remote Frame Rate(fps) and Remote Quality settings will have no effect, and the client's parameters will be same as server's.

6. Variable digital rate table

Image quality	recording environment	occupied disk space (/com/hour)
Poorest	low action indoor	about 45mb
	high action road	about 95mb
medium	low action indoor	about 70mb
	high action road	about 180mb
best	low action indoor	about 160mb
	high action road	about 320mb

***Note: Invariable digital rate does not improve image quality, but it is helpful for determining the amount of disk space needed for recording data. Variable digital rate recording is recommended.**

GROUP SETUP Cameras can be grouped to work according to a set schedule with specific record mode settings applied to all cameras in the group.

Note: If you apply multiple group setups to the same camera, only the last one will apply.

[Selected Group] Select group number.

[Selected Cameras] Select the cameras to include in the group.

[Pre-Event Record] Determines how long data should be recorded BEFORE an alarm or motion is triggered. When the DVR system is in Motion Detect mode or Sensor Detect mode, it can record video BEFORE the alarm is trigged.

[Post Record Time] Determines how long data should continue to be recorded AFTER an alarm or motion is NO LONGER being triggered. When the DVR system is in Motion Detect mode or Sensor Detect mode, it can continue to record video AFTER the alarm or motion is no longer being triggered.

[Record Audio] Enables/Disables the recording of audio.

Schedule Setup (Example for the following figure)

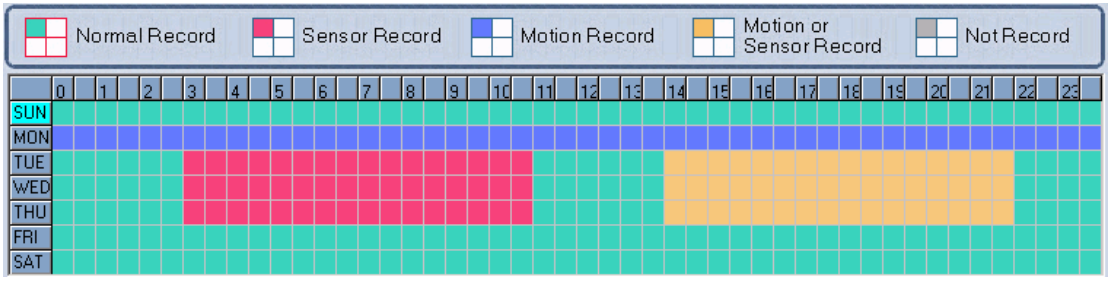


Figure1-3-6

Tips: Each block represents half an hour. First, click the desired record mode icon , then, left-click in the schedule diagram where you'd like the chosen record mode to start, and drag to select areas to apply it to. Multiple areas can be selected. For instance, a user could click and drag, selecting 0300 to 0900 on Monday, Tuesday, and Wednesday. The user could then select 0900 to 1300 on Thursday and Friday. The two selected areas can have different record modes applied to them as well.

1. Normal Record (Green): DVR System is always recording video. (e.g. Sun. Fri. Sat. in Figure 1-3-6)

2. Motion Detect (Blue): DVR System begins to record video only when it detect moving object. (e.g. Mon. in figure 1-3-6)

Here's a brief description of Figure 1-3-6 to help you better understand how record mode settings and scheduling work: On Monday, all cameras in the selected group are set to MOTION RECORD for the entire day, while on Sunday, they are set to NORMAL RECORD, which means that they will record non-stop for the entire day. On TUE, WED and THU from 3:30 to 11:00, the selected group of cameras is set to SENSOR RECORD, and from 14:00 to 22:30 it changes to both MOTION DETECT record mode and SENSOR DETECT record mode; For the remainder of the day, the group is set to NORMAL RECORD.

3. Sensor Record (red): DVR System begins to record video only when there is a sensor alarm. (3:30 to 11:00 in Tue. Wed. Thu.)

***Note: The time setting must be correspond with the "Check Alarm" settings in SENSOR SETUP, otherwise it won't work properly.**

4. Motion or Sensor Record (yellow): DVR System will begin to record when it detects motion OR when there is a sensor alarm.

5. Not Record (gray): DVR System does not record video.

2.3.3. Sensor set-up

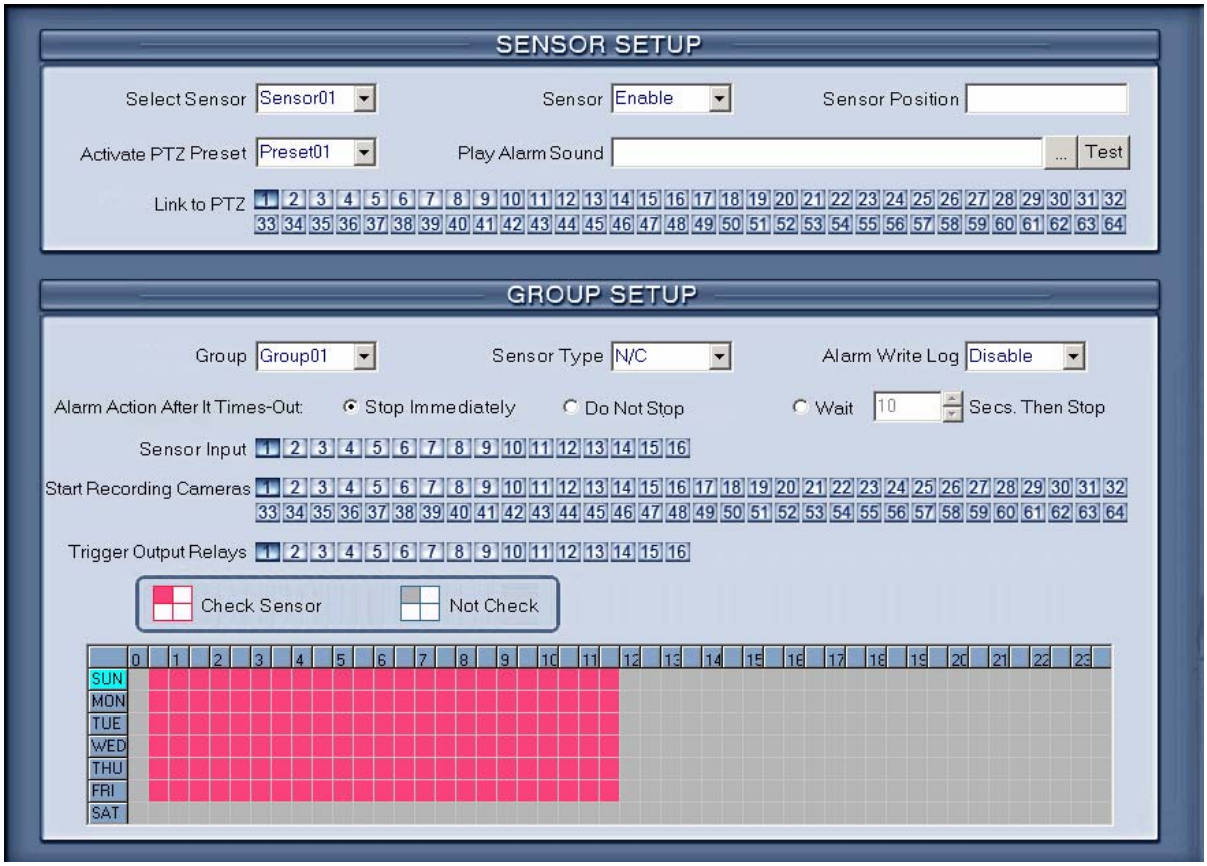


Figure1-3-7

SENSOR SETUP

[Select Sensor] Select the camera from the drop-down list in order to set the parameters for a sensor.

[Sensor] Enable/Disable sensor for selected camera.

[Sensor Position] Create a custom description for selected camera for easy identification.

[Activate PTZ Preset] Select PTZ camera preset number . PTZ camera will auto-move to the position associated with this preset when there is an alarm. (requires a PTZ camera). If you're not using a PTZ camera, simply ignore this setting.

[Play Alarm sound] Select a sound file (must be in .WAV format) for the sensor. If there is an alarm, the sound file will be played.

[Link to PTZ] Select which PTZ camera will respond to this sensor alarm. If you're not using a PTZ camera, simply ignore this setting.

GROUP SETUP

Sensor group set up is very similar to the group set up of camera recording.

[Sensor Type] Select N/C or N/O alarm type.

[Alarm Write log] Enable/Disable written alarm log feature.

[Alarm Action After It Times-Out] Select system alarm linkage mode after an alarm time-out. “Stop Immediately” means the system stop alarm immediately after the alarm driver stops an alarm. “Follow Input State ” means the system won’t stop an alarm until after the alarm driver stops an alarm. “Delay” means the system will stop an alarm at your setting time after the alarm driver stops an alarm.

[Sensor input] Add sensor to selected group.

[Start recording cameras] Select which cameras will respond with this sensor group. They will start recording and automatically connect to remote network clients when there is an alarm.

[Trigger Output Relays] Add alarm devices (alarm out port) to this group. e.g. siren, light. All connected devices will send alarm message when there is an alarm.

Schedule Setup (Example for below figure)

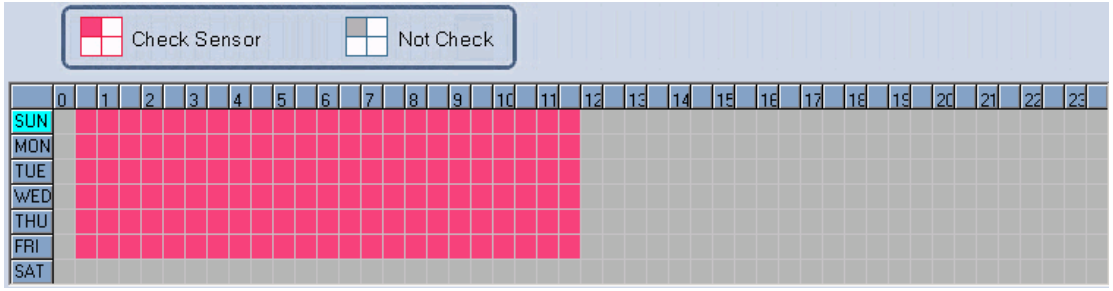


Figure1-3-8

1. Check Alarm (Red): DVR System responds with sensor during this period. (00:30 to 12:00 from Sun. to Fri.)

2. Not Check (gray): DVR System doesn’t respond with sensor during this time.

Note: If you apply multiple group setups to the same camera, only the last one will apply.

2.3.4. PTZ & Linkage setup

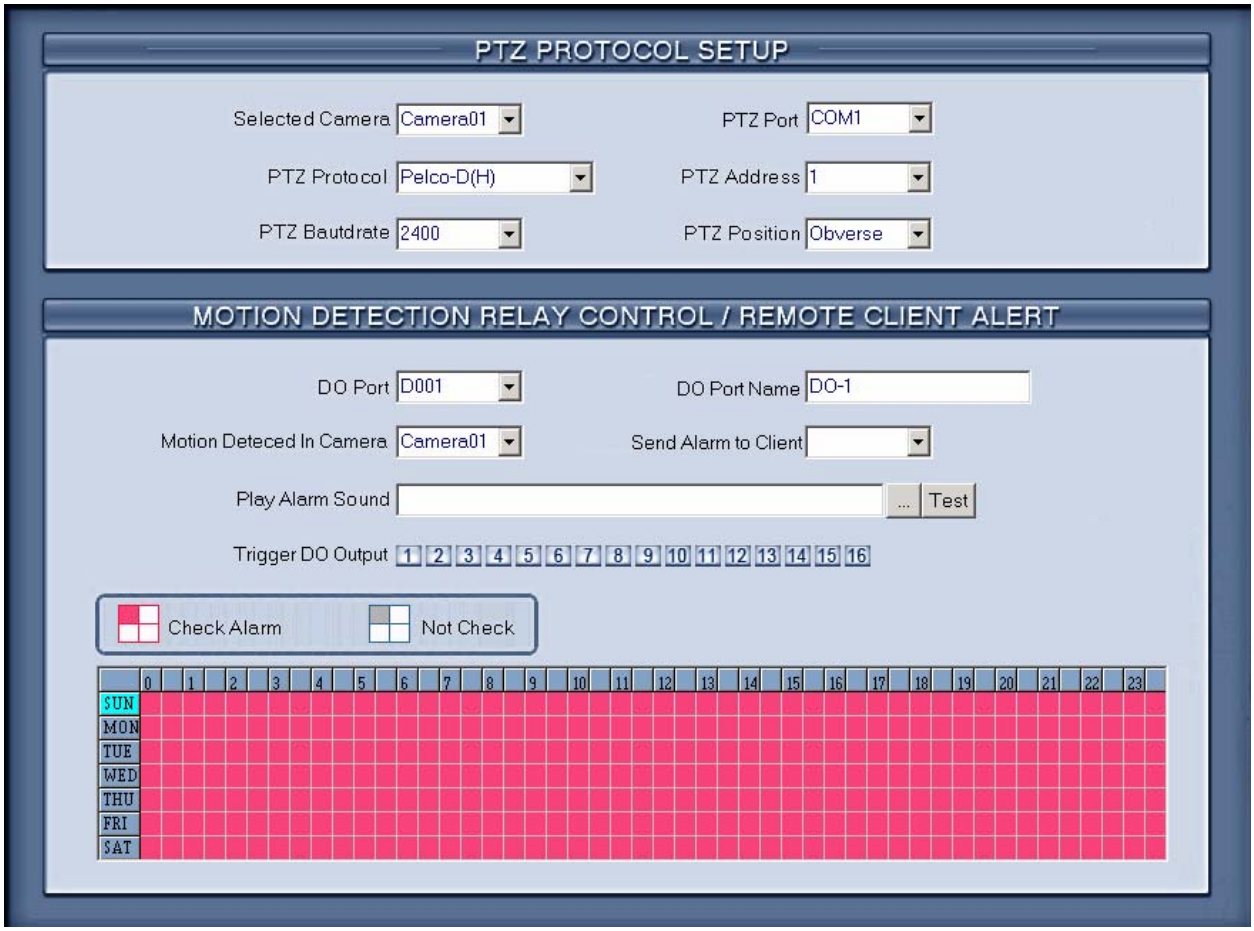


Figure1-3-9

[Selected Camera] Select the camera from the drop-down list to set its parameters.

[PTZ Port] Selects PTZ communication port. Please choose “No Com” if you don’t plan on using a PTZ port.

[PTZ Protocol] Selects the PTZ protocol for the selected PTZ camera.

[PTZ Address] Allows user to set the camera ID number corresponding to the PTZ camera being controlled. Note: PTZ cameras typically have a bank of dip switches for assigning a PTZ address. Both the PTZ camera ID number and the corresponding number in

this box need to match.

[PTZ Baudrate] Sets Baudrate for the PTZ camera.

[PTZ Position] This setting allows a PTZ camera to be installed “upside down” when necessary, which would require that the resulting video image be flipped or inverted. PTZ position can be adjusted here, depending on the position of the selected PTZ camera’s installation.

Notes:

1. PTZ position will influence PTZ control. e.g.: if you set as obverse and press left, then it will turn left. If you set as inverse and press left, then it will turn right.

2. If there is (H) after the PTZ protocol, it supports High Speed Presets. If there is no (H), then the camera only supports PTZ Control.

MOTION DETECTION RELAY CONTROL / REMOTE CLIENT ALERT

[DO Port / DO Port Name] DO com description is irrelevant with linkage. If alarm input is in use and a camera sets off an alarm, the alarm will be sent to the client automatically;This also applies to sensors. However, the client only connects to the cameras with alarms.

[Send Alarm to client] Enables/Disables alarms being sent to network clients.

[Motion Detected In Camera] Selects camera from dropdown list.

[Play Alarm Sound] Selects a “.WAV” sound File for a camera alarm. If there is an alarm, the sound file will be played.

[Trigger DO Output] Selects which DO ports respond with selected alarm camera. All connecting devices will send alarm message when there is a Motion Detect.

Schedule Setup (Example for below figure)

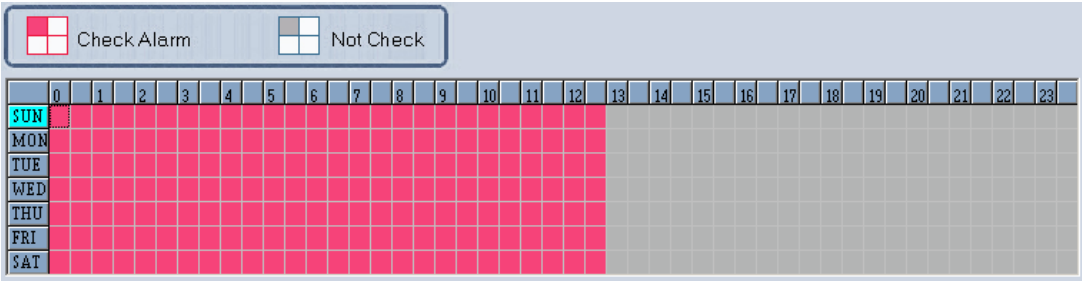


Figure1-3-10

1. **Check Alarm** (Red): DVR System responds to Motion Detect and sends alarm message only during the selected time. (Every day 00:00 to 13:00 in figure 1-3-10)

2. Not Check (gray): DVR System DOES NOT respond to Motion Detect during the selected time (Every day 13:00 to 23:59 in figure 1-3-10).

Note:

1. **The time setting must correspond with Motion Detect time of CAMERA SETUP, otherwise it won't work improperly.**
2. **Check Alarm Setting does not affect Motion Detect Record. It DOES, however, affect motion detect "alarm out" and motion detect "alarm to network."**

2.3.5. Send Email setup

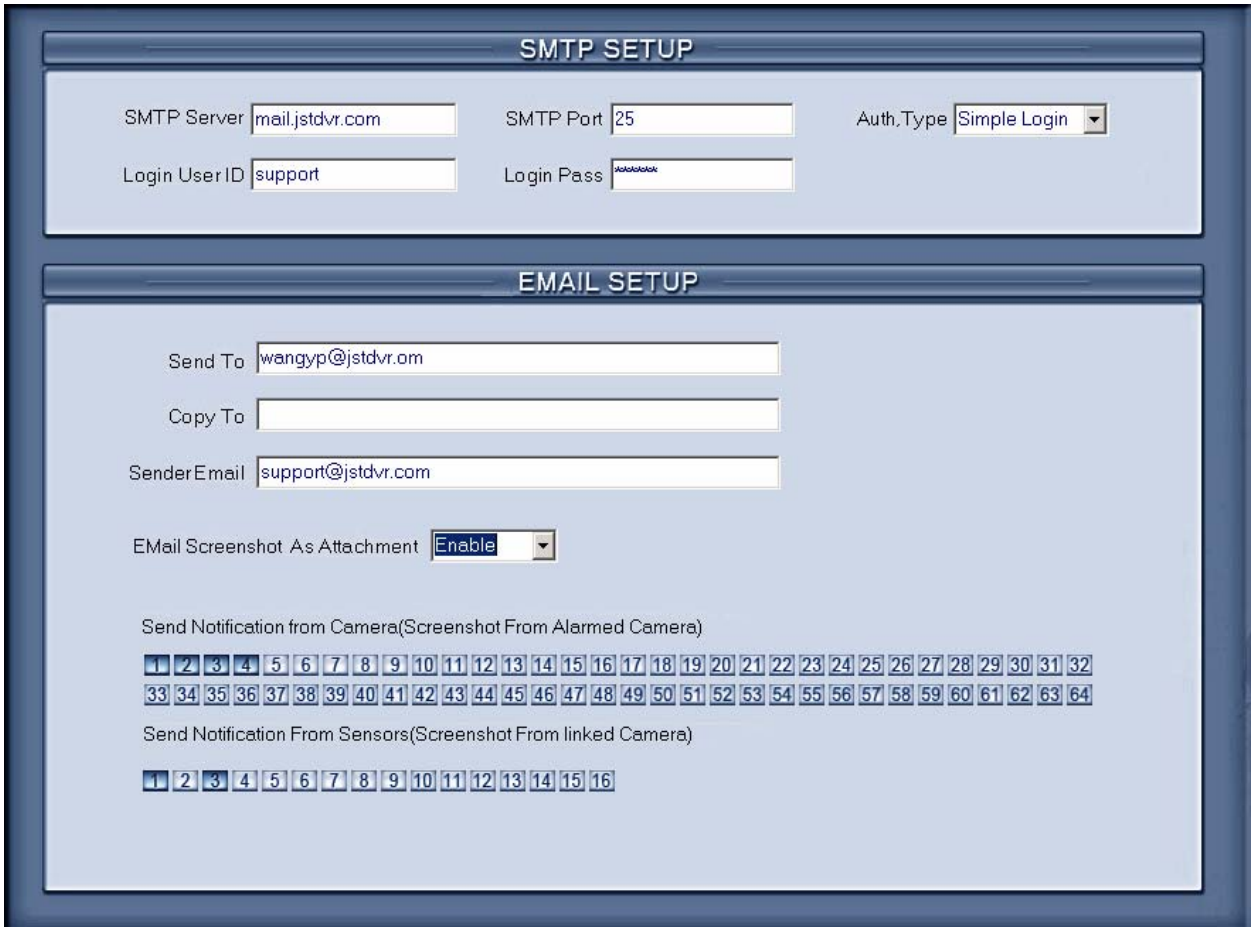

SMTP SETUP
SMTP Server mail.jstdvr.com
SMTP Port 25
Auth.Type Simple Login
Login User ID support
Login Pass
EMAIL SETUP
Send To wangyp@jstdvr.om
Copy To
Sender Email support@jstdvr.com
EMail Screenshot As Attachment Enable
Send Notification from Camera(Screenshot From Alarmed Camera)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
Send Notification From Sensors(Screenshot From linked Camera)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Figure1-3-11

SMTP SETUP

[SMPT Server] SMTP server address, eg: mail.avtdvr.com,

[SMPT Port] SMTP TCP listening port for connect request.

[Auth.Type] Login mailbox SMTP authentication type.

[Login User ID] Mailbox's ID.

[Login Pass] Mailbox's password.

EMAIL SETUP

[Send To] Address of recipient.
[Sender Email] Operator's (sender's) email address.

[Email Screenshot As Attachment] When there is an alarm, the system will grab picture and the operator can have the picture emailed as an attachment .

[Send Notification from Cameras (Screenshot From Alarm Camera)] Operator can select which camera alarms send email notification.

[Send Notification from Sensors (Screenshot From Linked Camera)] Operator can select which camera sensors send email notification.

***NOTE: If emailing a picture as an attachment, you should check alarm of the selected camera or the sensor, and enable "alarm send to network".**

2.3.6. Digital Matrix setup

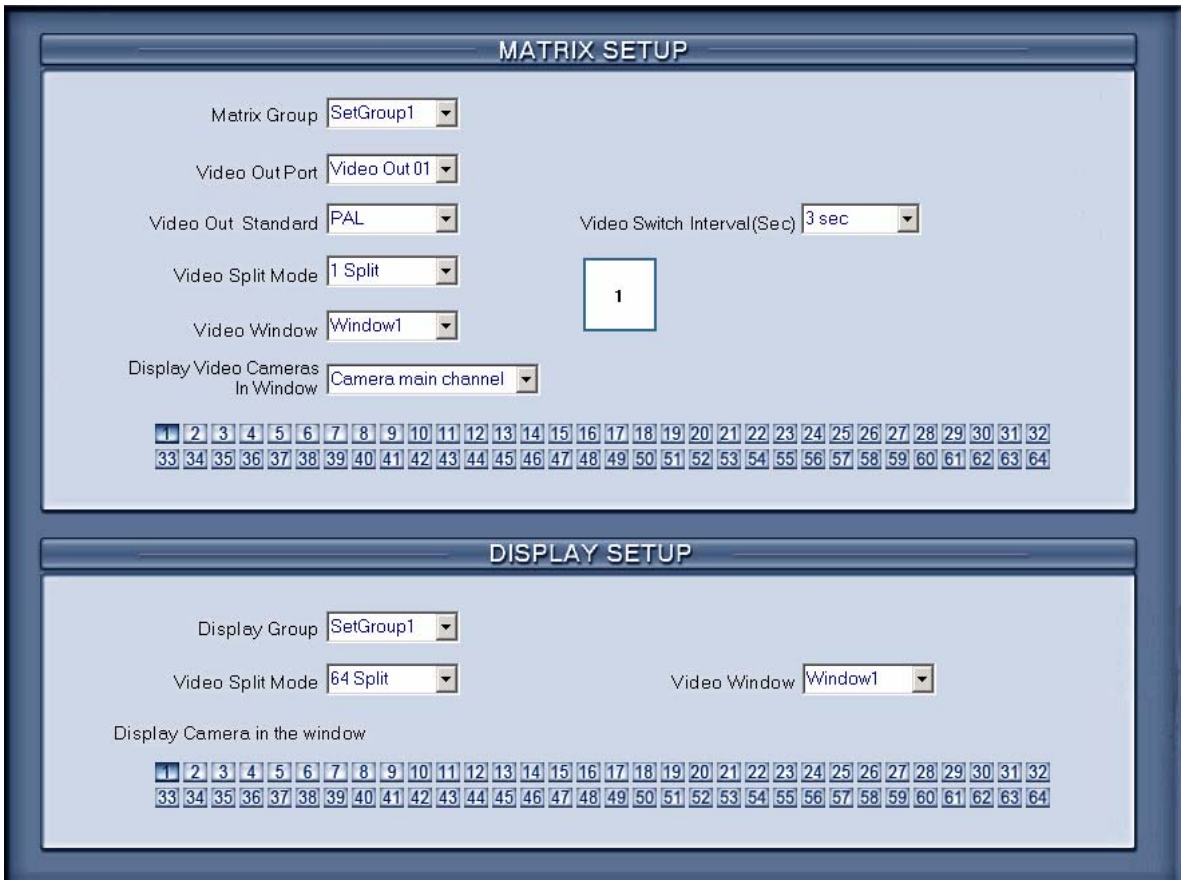

MATRIX SETUP
Matrix Group
SetGroup1
Video Out Port
Video Out 01
Video Out Standard
PAL
Video Switch Interval(Sec)
3 sec
Video Split Mode
1 Split
1
Video Window
Window1
Display Video Cameras In Window
Camera main channel
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
DISPLAY SETUP
Display Group
SetGroup1
Video Split Mode
64 Split
Video Window
Window1
Display Camera in the window
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64

Figure1-3-12

MATRIX SETUP

[Matrix Group] System operator can organize cameras into groups for Matrix video output, with each group possessing a different display mode. There are 16 groups available.

[Video Out Port] Matrix video out channel; The number of channels available is determined by the Matrix Decoder Board.

[Video Out Standard] PAL or NTSC.

[Video Split Mode] Video out display mode, there are 1split , 2split , 4split , 9split , 13split 16 split .

[Video Window / Display Video Camera in window] After selecting video split mode, there will be a corresponding display video window. Select one or more cameras to display in this window.

***Note: Each camera can only be displayed in each window once.**

[Video Switch Interval(sec)] Time Interval that each window shows cameras in rotation when there is more than one camera in one window.

DISPLAY SETUP

[Display Group] System operator can organize groups for video output, with each group possessing a different display mode. There are 16 groups available.

[Video Split Mode] Video out display mode, the split mode is the same as main window's display split mode. These are1,4,9,12,16,20,25,28,33,36,40,49.

[Video Window / Display Camera in the window] After selecting video split mode, there will be a corresponding display video window; Select one camera show in a window.

***Note: Each camera can only be displayed in each window once.**

2.3.7. System user set-up

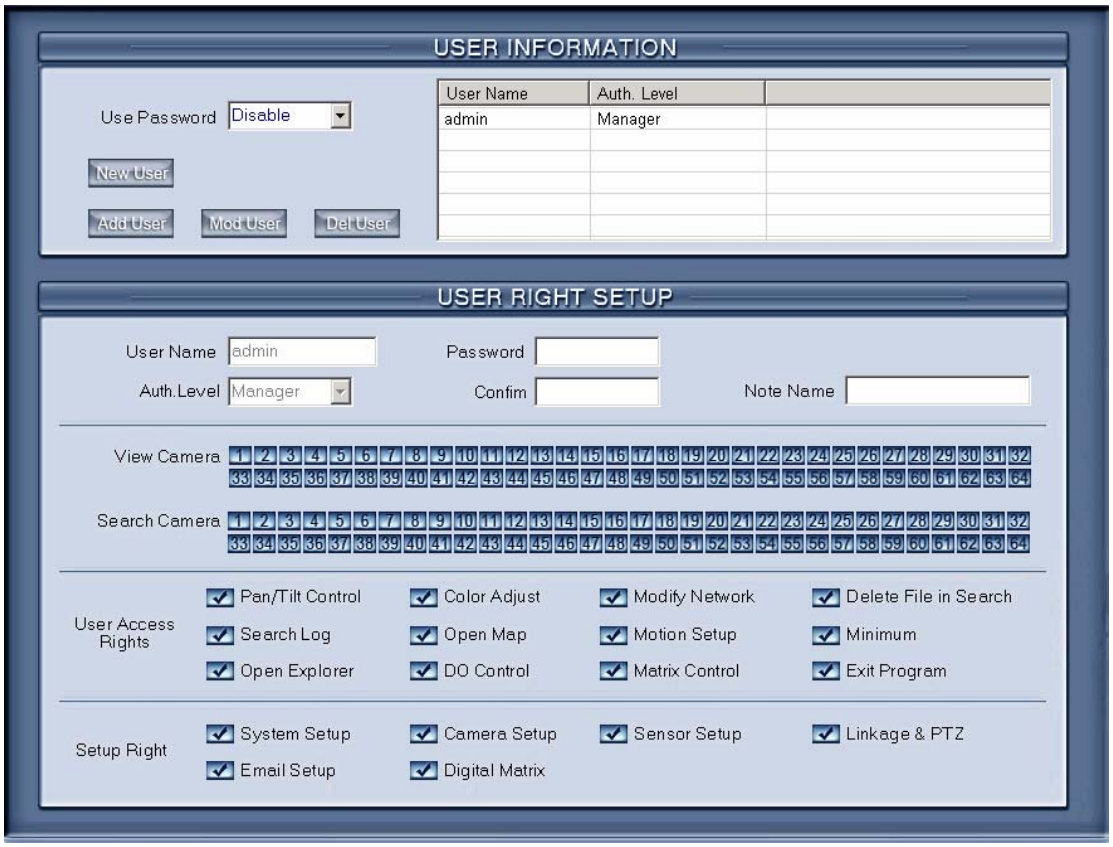


Figure1-3-13

Creates user accounts based on administrator or operator privileges. The DVR system supports a maximum of 256 users.

USER INFORMATION

[Use Password] Click it to enable User Manage mode and activate the lock button in main window. Only authorized users can log into System in User Manage Mode.

New User Add a new user .Press this button, and input user information, including user name, password, and user level. Then Press Add User button, and the new user will be added to the user list.

Mod User Select user from user list, and modify his information and authorization, then click Mod User button to save user's modified information and authorization.

Del User Select a user from user list, click Del User button, and user will be deleted.

USER RIGHT SETUP

[User Name] Input new User ID in this box when adding a new user to the DVR System.

[Password] Set new user or selected user's password.

[Rights Level] Select user type. Only Administrator can make changes here.

[Full Name] Input a description of selected user.

[Confirm] Confirm password again.

View Camera –every user is granted access to view live images by default. To deny access, click a camera button and the blue button changes to gray.

Search Camera – Rights to view recorded video by each camera. By default every user is granted access to record video by all cameras. Granted rights are outlined in blue, denied access displays in gray, the same as Watch Camera.

User Access Rights

Select operational tasks, granting or denying rights. Operational tasks are normally reserved for administrative, privileged accounts. Operators are rarely granted rights to adjust camera color, exit program, explore files or operate PTZ controls.

Figure1-3-14

Setup User Right

Select setup rights to grant or deny to selected user.

Figure1-3-15

2.4. System playback

2.4.1 Enter Play back Mode:

Click button in main window to enter playback window.

Figure1-4-1

2.4.2 The Playback Screen Interface

1] Click this button

to choose a date to playback data from. Click or to change month and year.

By default, today's date is selected. A green number means that there is data recorded for that day. A yellow number represents the currently selected day. Today is selected by default. Only green numbers can be selected.

When an eligible date is selected, the display column will automatically switch to the

window.

Figure 1-4-6

2] Next, click this button

to show the status of all cameras (If you chose a DATE first, you will automatically be switched to this view). If the color of a number is BLUE, it means there is recorded data available. If GRAY, there is no recorded data for the camera.

Figure1-4-7

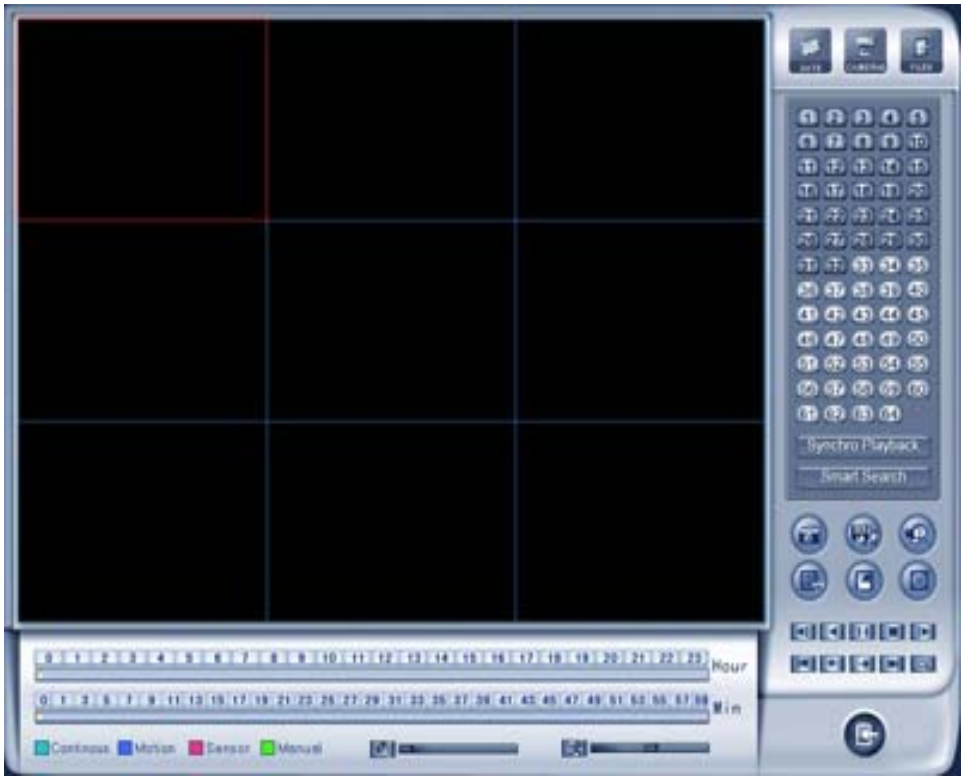


Figure 1-4-7-2

3] Next, click the Window Split button, which determines the number of playback screens that will be visible. The choices are 1, 4, & 9. Click the square that you'd like your camera to play back inside of (you'll pick a camera in the next step). Once a square is selected, it's outline will change to the color red (see figure 1-4-7-2).

4] Now, click the camera number that you'd like to play back data from, in the module to the right. The data will playback in the window that was selected in the last step. Remember: A Gray channel number means that the channel has NO recorded data. Clicking on a Gray channel number will NOT produce playback. You must click on a BLUE camera number. The BLUE color indicates that a particular camera has recorded data for playback.

The grid below the playback screens is where you can jump to different times of the day that the selected camera has recorded data. Playback for the selected camera will begin from the earliest point in the selected day that the camera began recording. For example, if the camera was set to Motion Detect, and it detected motion at 2pm, 2pm is where playback will begin from.

You'll see a small yellow triangle at the far left for both grids; the top grid represents HOUR, and the

bottom one represents MINUTES for the selected date. The recorded footage is color coded, allowing you to determine what mode the camera was in when it recorded data. Simply move the sliders to the desired time, and the recorded video data will display in the selected screen. Repeat this process up to a maximum of 9 cameras.

Symchro Playback Click this button to synchronize all playback screens to the time of the currently selected camera.

Smart Search The Smart Search allows users to draw a zone on a video image and perform a search based on any disturbances that occur within that zone. Simply press the Smart Search button, left-click and drag to draw a square around an area of interest, and the system will play all disturbances that may have occurred within this selected area on the selected date. The system will start playback 3 seconds before each disturbance, and 3 seconds after. Pressing the Smart Search button again will disable it.

Figure1-4-4

1. There is a telephone on the desk (see picture 1).

2. Now it's gone . . . (see picture 2).

3. If you want to know what happened to the telephone, you can click Smart Search, draw a square around the empty spot where the telephone used to be, and the system will "jump" to all points in time where disturbances occurred within the square drawn.

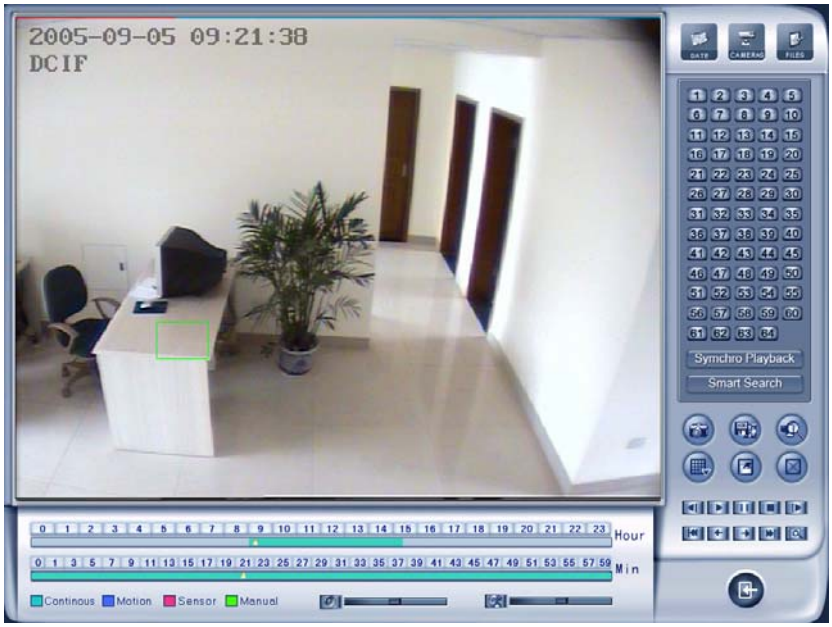


Figure1-4-5

***Note:**

1. Pressing the SYNCHRO PLAYBACK button during a smart search will disable smart search.

2. The sensitivity of the smart search is the same as motion detect.

Navigation Controls

Last frame, Start, Pause, Stop and Next frame

First frame of selected day, Last min., Next min. and Last frame of selected day.

Image zoom out. If you press this button, then left-click on an image, it will zoom in 4X. Right-click the imagae, and it will return to normal size.

Slider adjusts the volume of audio. Button enables/disables audio.

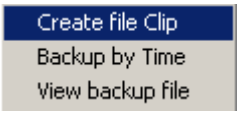
Slider adjusts playback speed. Click the button to resume normal speed.

2.4.3 Capture pictures

Click the capture button to save an image from a selected playback screen. A dialog box will appear and ask you to input a file name. After you confirm, you will be asked to input a path for saving the image.

***Note: the size of the image is the same as that of the playback window.**

2.4.4 Create clip file

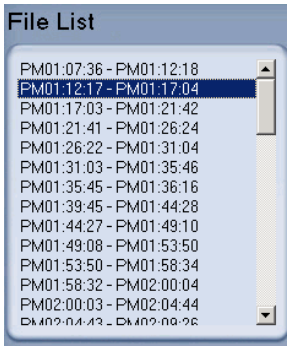
Click button There are two options 

to select; Choose “Create file Clip.”

A. Create file clip:

Figure1-4-9

[Select Channel] Allows user to select a camera from a drop-down menu (at the top of the screen).



[File List] Allows user to select a segment to save as a clip. Double click the file to preview.

FIle Attribute
Begin Time : PM01:12:17
End Time : PM01:17:04
File Size : 30.23 MB
Frame Rate : 25 fps
Resolution : 352 * 288
Record Type : Continous record
Clip Size :

[File Attribute] Provides information about the selected file. Includes beginning time, ending time, file size, resolution, frame rate etc.

Enables/Disables sound.

Play control slider. Allows you to scrub through the selected segment.

[Save path] Allows you to choose the location that the clip will be saved to.

Sets the beginning and ending position of the clip. Move the **Play control slider** where you'd like the clip to begin and click the left button. Move the **Play control slider** where you'd like the clip to end and click the right button.

After setting the beginning and ending points of the clip, click this button to save the file.

Note: If you intend on burning a CD-R or DVD-R disk of backup files for viewing on another computer, be sure to include a copy of the "Player" software included on the software disk that came with your DVR System. Without this player, users won't be able to view the encrypted video files.

B. Backup by Time:

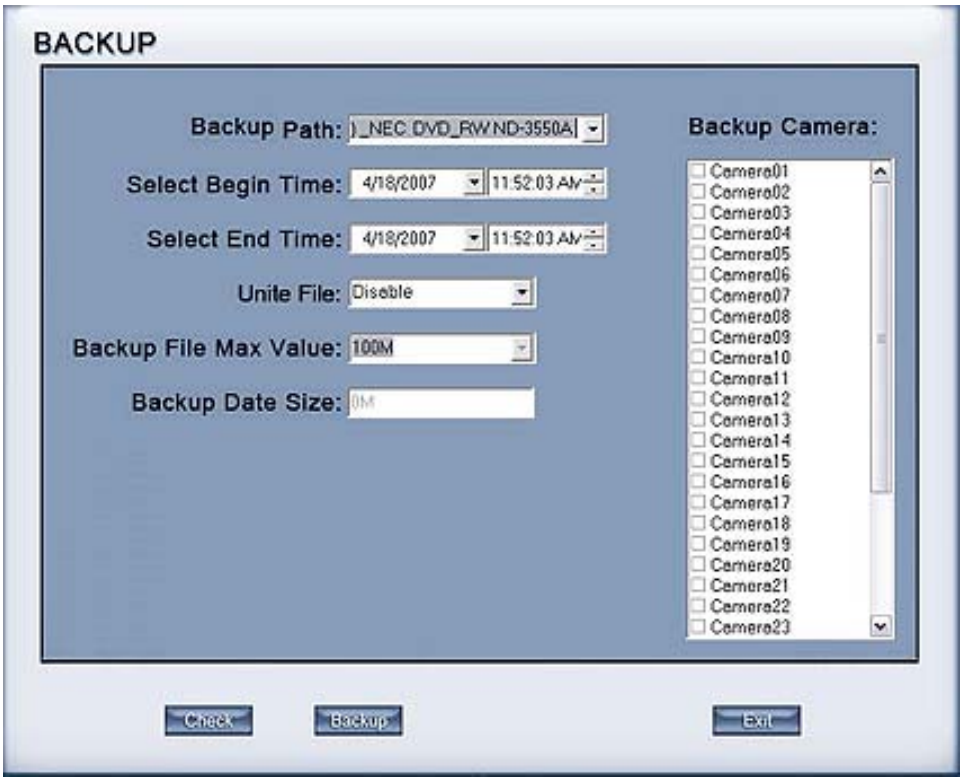


Figure1-4-10

[Backup Path] Allows user to choose where to save the back up file to.

[Backup Camera] Allows user to choose a camera for back up. Multiple cameras may be selected; Separate files will be created for each.

[Select Begin Time / Select End Time] Select the backup files' beginning time and ending time.

[Unite File] Enable or disable file unification . If disabled, the back up file will consist of a series of clips. If enabled, all of these clips will be combined into a single file. Users can set the maximum file size of the combined file.

[Backup File Max Value] Allows user to set the maximum file size (in megabytes) of the united file. If the united file is larger than the maximum value set here, the united file will be split. This size is usually based on the media that the user intends to back up the file to. For instance, if the user intends to back up files to CD-R, this value would be set to 650MB. Let's say the unified file is actually 1000MB in size. Because the **[Backup File Max Value]** is set to 650MB, the DVR System will split the unified file into two

smaller files—the first one will be 650MB in size, and the second would be 350MB in size. Because the user intended to back up to CD-R, the first file can be burned to one CD-R, and the second can be conveniently burned to a second CD-R. If the user hadn't enabled **[Unite File]** and entered a **[Backup File Max Value]** of 650MB, the DVR System would have created a SINGLE backup file, 1000MB in size. This of course, is too large to fit on a CD-R, and the user wouldn't have been able to back up the file.

Users can check the size of the file they intend to back up by clicking the Check button at the bottom of this screen. The size will be displayed in **Backup Date Size**.

Finally, click the Backup button to back up the file(s).

Note: If you intend on burning a CD-R or DVD-R disk of backup files for viewing on another computer, be sure to include a copy of the "Player" software included on the software disk that came with your DVR System. Without this player, users won't be able to view the encrypted video files.

2.4.5 Edit Captured Pictures

Click to enter the search window:

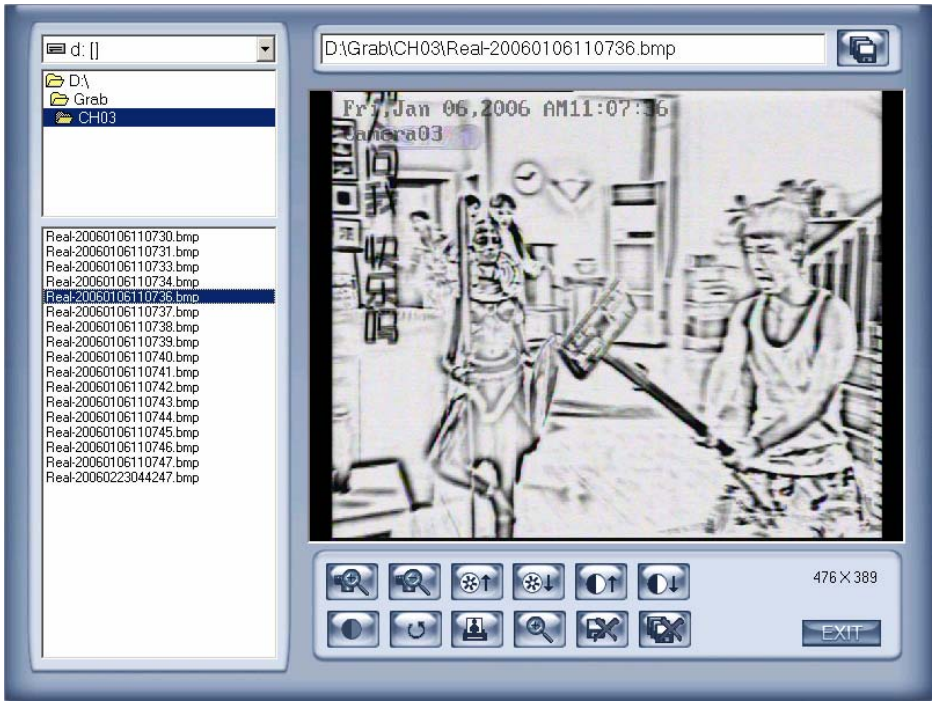
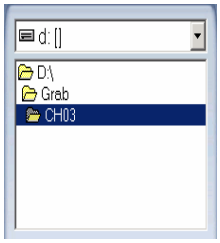
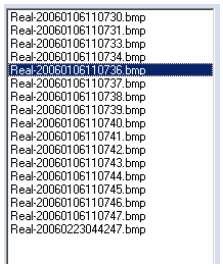


Figure1-4-12



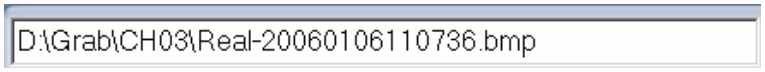
Directory list.



File list. Choose an image to edit.

Edit buttons. Enlarge, Shrink, Brightness & Contrast.

Revert image back to original.



Name and path of current picture. If you want to save the edited picture, you can change its name and path here, with bmp and jpg as the suffix.

Save the edited picture.

Print picture. When the image is wider than 400 pixels, it will be resized to a width of 400 pixels. If the picture is smaller than 400 pixels, it will be enlarged/resized to a width of 400 pixels.

Enlarge image.

Delete current file or delete all files.

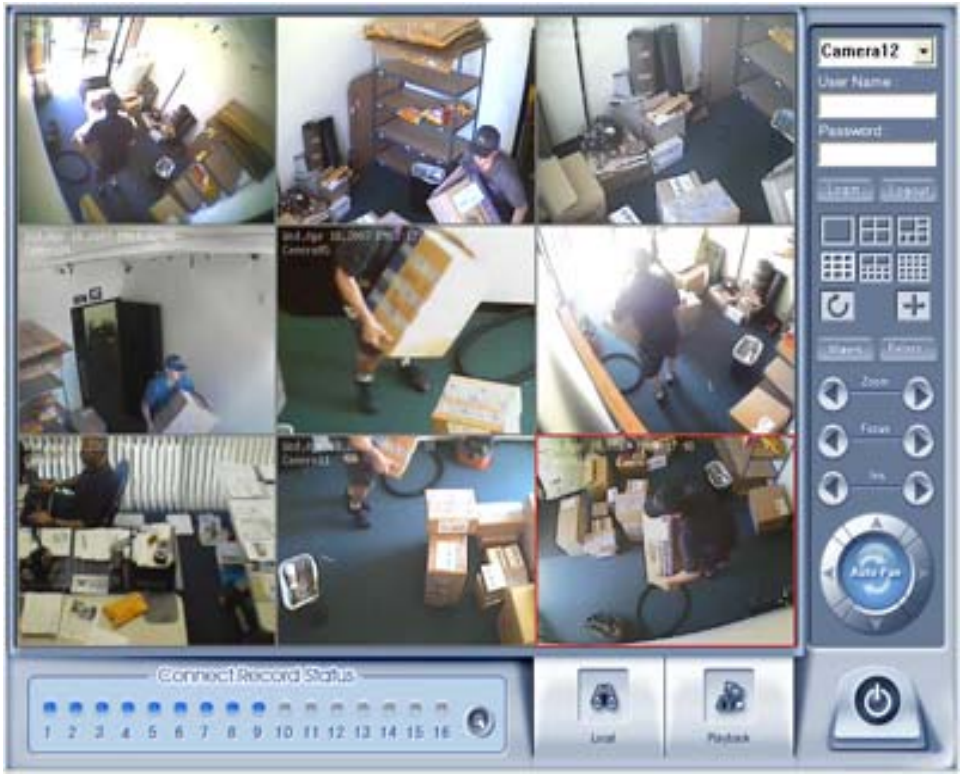
Open all: Press this button, open all selected images in separate windows for editing.

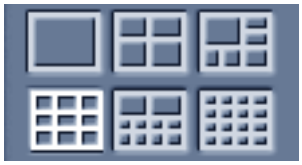
Close all: Press this button, close all windows.

3. IE client

Clients can view video footage using Internet Explorer. The default web server port is 80. If the web server port is changed to a different number, then clients should add the new port number to the IP address when accessing the DVR System remotely using Internet Explorer. For example, if the web server port uses the default configuration, and the IP address of the DVR System is http://78.168.0.119, then the client would simply launch Internet Explorer, and type http://78.168.0.119 in the address bar to access the DVR System. Alternatively, if the web server port is changed to 1290, the client would have to enter http://78.168.0.119:1290 into the address bar in Internet Explorer to access the DVR System remotely.

IE Client Software GUI



First choose a screen mode.  IE Client user can select 1,4,6,9,10 or 16 for screen mode. However, the maximum number of cameras viewable at once is 9. For this reason, screen modes 10 & 16 are not recommended. *Note: If the DVR System has more cameras than the screen mode selected by client can display, the* *button can be used to rotate through the additional cameras.*

Next, enter a Username and Password. Press

to connect to the DVR System. Pressing

will disconnect the user from the DVR System.

Each screen can display any of the cameras available on the DVR System. To view a particular camera in one of the screens, first, click on a screen to select it (it's outline should change to the color red). Next, select a camera using the

button. Now, the selected camera's video will display inside of the screen that you previously selected. Repeat this process to display up to 9 cameras.

The button switches to full screen mode.

If the DVR System administrator has granted the Client privileges for PTZ control, saving recorded data, and Search, all of these features will be accessible using the Internet Explorer interface.

Connect Record Status

Indicates that the channel is not connected.

Indicates that the channel is connected.

Indicates that the channel is connected and recording to the Client's hard drive.

Pressing this button will make all connected channels record or not record. Pressing or will also change the recording status (record or not record).

When clients press the button representing one of the 9 available channels, and the button changes to green ( ), the selected channel's video will be recorded to the local hard drive of the client. These files will be located at C:_RecordFile_.

IE Client Local Search & Playback:

Record data list

The first drop-down box allows you to split the screen into one partition, or four. The second drop-down box allows you to select the date for the local files that you'd like to play back. The third drop-down box allows you to select the "channel" that you'd like to view recorded footage from. Please note that while the drop-down box says "camera," in fact, it actually represents the channel that the footage was recorded from in the main screen. For example, if, on the main screen of the Internet Explorer interface, you clicked the first window, selected camera 1 from the drop-down box, and started recording channel 1 in the Connect Record Status box, camera 1 would be recorded to channel one. However, if you were to stop recording on channel 1 in the Connect Record Status box, click the first window on the main screen, then select camera 5 from

the drop-down box, and start recording channel 1 in the Connect Record Status box, you would now be recording camera 5 to channel 1. Because both camera 1 AND camera 5 have been recorded to channel 1, when pressing the Local Search & Playback button, and choosing a “camera” from the second drop-down box, you would actually choose “Camera01” to view the footage recorded from both camera 1 and camera 5. This is because “Camera01” really means “Channel01,” which is where both cameras were recorded to.

Local Search & Playback Control Buttons

Play control bar. Allows user to scrub through recorded video.

Information panel. Shows the selected window number, camera and the current play time etc.

Play control buttons; “Play”, ”Pause” and “Stop”.

Single frame play control. previous frame, next frame.

Play speed control. slow speed. fast speed.

Remote Search & Playback

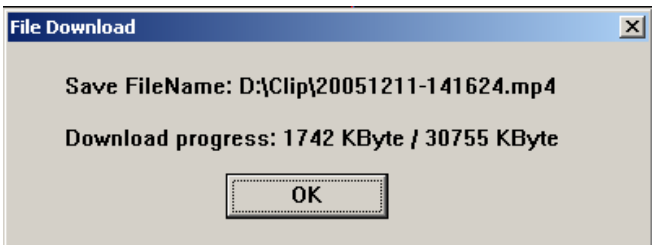
Remote Search & Playback is almost identical to **Local Search & Playback**, but **Remote Search & Playback** allows Clients to download ALL recorded files associated with a camera to the Client’s local hard drive. After selecting a camera from the drop-down box, and clicking the

button, ALL recorded video for the selected camera will be saved from the remote DVR System, to the local hard drive of the Client. Depending on the amount of video recorded for the selected camera, this could take a long time. After all files have been saved, a popup window will display the location of the saved files.

Because using the

button only allows for the download of ALL files associated with a camera, there's also a button that allows the Client to CHOOSE which video segments to download. This feature can save a lot of time. To access this feature, simply select a camera from the drop-down menu. All video files for the selected camera will display in the File List box below. Click on a file to preview it. When you've found a file you'd like to download, simply click it to select it, then click the

button. A dialogue box will open, allowing you to name the file, and choose a location to save the file to. Once you've done this, a popup window showing the progress of the download will appear.

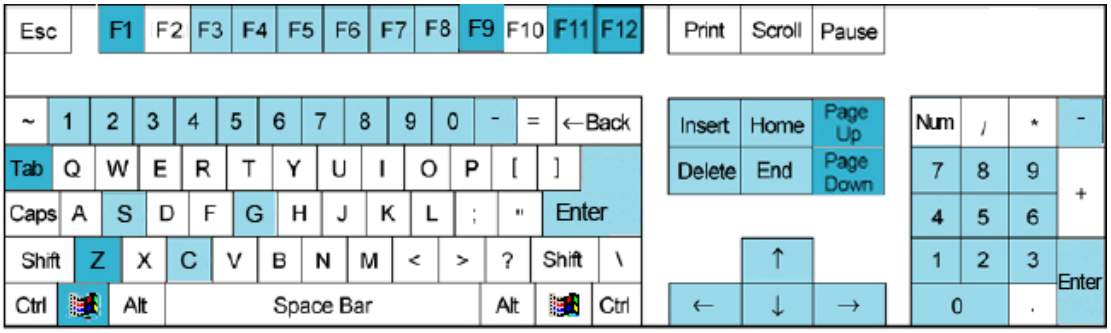


When the download is done, the popup will display a "Download Finished" message.

Appendix

Appendix A:

Shortcuts reference:


Esc
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12
Print Scroll Pause
~ 1 2 3 4 5 6 7 8 9 0 - = ←Back
Tab Q W E R T Y U I O P [ ]
Caps A S D F G H J K L ; " Enter
Shift Z X C V B N M < > ? Shift \
Ctrl Alt Space Bar Alt Ctrl
Insert Home Page Up
Delete End Page Down
↑
← ↓ →
Num / * -
7 8 9 +
4 5 6
1 2 3 Enter
0 .

This color key denotes PTZ control.

This color key denotes other function control.

PTZ control:

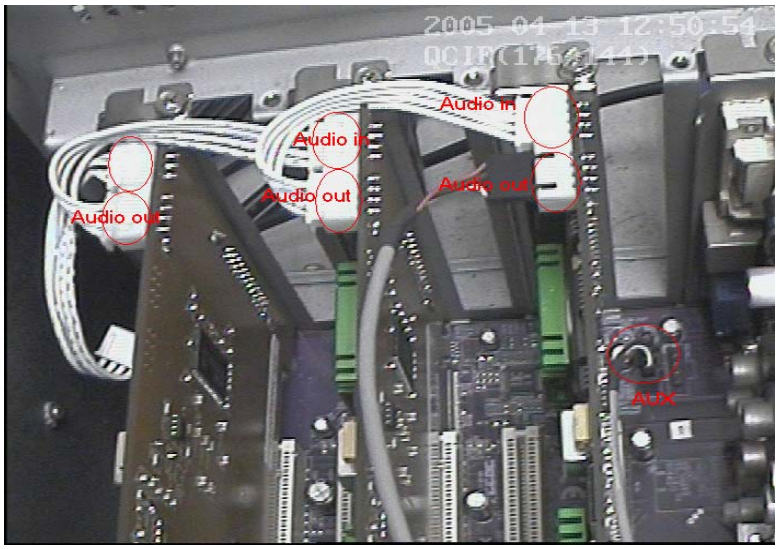
Key	Function
↑	Up
↓	Down
←	Left
→	Right
Home	Zoom-
End	Zoom+
Insert	Focus-
Delete	Focus+
S	Save preset
G□Enter	Call preset
C□—□ Num0-9	Presets Control Operation
F3-F8	Tracking all presets, interval is 3-8 Sec of every preset.(F3 denotes 3sec.F4 denotes 4 sec,F8 denotes 8 Sec etc.)

Other control:

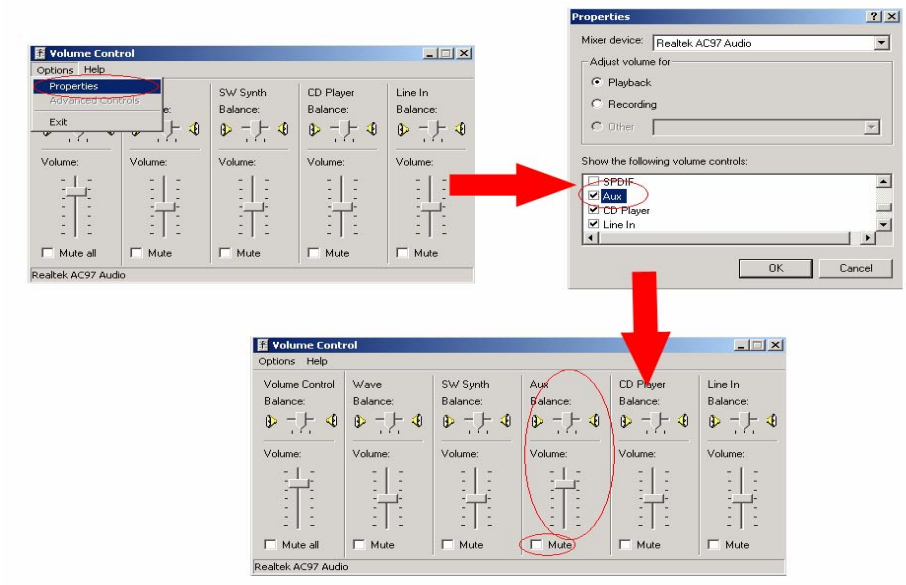
Key	Function
F1	System Help
Tab	Switch the camera channel
Page Down	Switch to the next screen
Page UP	Switch to the previous screen
F9	All cameras begin recording in 30 Sec during emergency
F11	Zoom in/out the single camera view
F12	Switch to Full screen mode
WIN+ Z	Minimize the Main System window

Appendix B: Audio preview

First, make sure the card is connected as follows:



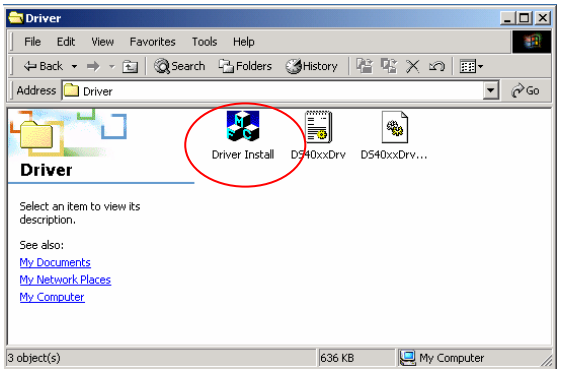
NOTE: If there is no preview sound, go to Start > Control Panels > and double-click “Sounds and Audio Devices.” Click the “Volume” tab, and click the “Advanced” button. Under menu items, click “Options,” and select “Properties.” Place a “check” in the box called “Aux.” You may have to scroll down before you see it. Click “OK,” then, in the “Volume Control” window, make sure that “Aux” isn’t muted, and that it’s volume slider is at least at mid-level.



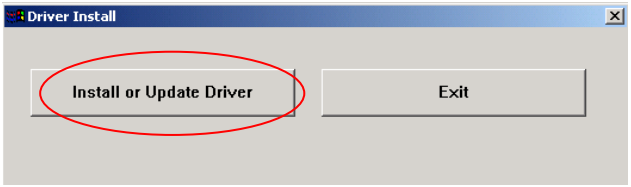
Appendix C: Update The Driver of Your DVR Card

Sometimes it is necessary to install or update the drivers for you DVR Card. The steps are as follows:

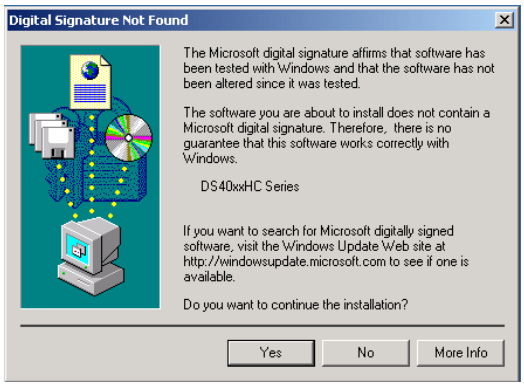
1. Find the driver folder, and run the “Driver Install” program.



2. A dialog box will show on the screen.



3. Click “Install or Update Driver” button, and a prompt will ask if you’d like to continue the installation. Click “Yes.”


Digital Signature Not Found
The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested.
The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.
DS40xxHC Series
If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available.
Do you want to continue the installation?
Yes
No
More Info

5. When is installed successfully, the program will display a prompt. Click OK, and you’re finished.